

cmc 30



picmc 30

Notes for

Geography Books

picmc 30

Coast. extended on N.W. & S. sides
to reg. to be valuable. Length 1500 m.
Most marked features of outline
pen. of Polderen on N. protruding
ext. of Orlandy - double curve
of Med. coast. concave W. of
Marseilles (gulf of lions) convex
S. of M. to Italy.
Minor features in N. coast - prom.
of Frimery. bet. Calais + Dover.
ext. of Somme + Seine. - (C. de la Hague)
bays bounding Polderen - B. of
Seine - B. of S. Malo - B. of S. Brede
+ Pt. Sillon. On W. coast.
prom. of S. Mathieu + Raz Pt.
Bays of Brest + Douarnenez.
Anateline B. - B. of
Morbihan Bay. + ext. of
Loire + Gironde - B. of
d'Arcahon - between France
+ Pyrenees. - Char. of coast
varies. - Sandhills fringe
S. on N. - ruffed in N.W.
(esp. Brittany) - remarkable
regular sandhills in S.W.
(Fascony + Freinne) +
Lapins in S. from Pyrenees
to Rhone - series of islands
fringe coast from B. of Biscay
as far S. as Gironde - the chief
from N. to S. being Ouessant, Belle
+ Morimontier. Gen. N. - Oleron.

P30mcs0

Harbours - port in prop to east of coast
Cherbourg on the Cotentin - best -
large port by breakwater - Dunkirk
good roadstead - Havre - chief
com. port on N. - Calais &
Boulogne Artiz. ports adapted
for Eng. traffic - S. In also -
dangerous of access from rocks
S. of, bays on N. Coast too remote
for for com. - ~~Brest~~ On
W. Coast - Brest good harbor
roadstead between I. de Ré &
Rochelle - Bourdeaux
on frontier reached by ves
of cons. size - On S.
Marseilles & Toulon, great
harbours

- Configuration 1. broad belt
of lowland crosses diag. from
N. E. frontier to S. of Biscaya - much
flat - partly in Landes in S. W.
undulating between Loire & Seine.
2. lowland bounded N. & S. E. by
a highland - the Cévennes -
eastern limit
3. Port of E. highlands in range
of Pire d'Or., with the plateau
of Langres
4. Bath Cévennes - basin of Rhone
& Saône & hilly country between
Rhône & Vosges
5. Into descent - is, mts of Jura - pure
limestone

River System

Most mps. slope to W. tendency
 tot. Watershed - Cevennes
 P. d. d. as + plateau^d Langres
 rivers W. of this line have N.W.
 tendency - flow into Atlantic
 as Garonne & Loire. Or in N.
 as Seine & Somme
 Rivers S. of line flow into
 Med. as Rhone & Saone. Or flow
 N. & towards basin of Rhine &
 N. Sea. Moselle. Meuse, Saane
 & Scheldt. - The Vosges divide
 basins of Upper Moselle & Rhine.
 basins of W. rivers on large
 scale compared with one of country
 Loire Garonne & Seine occ. 2 of one
 of 4 - Occasional depressions
 between basins aff. facilities for
 canals. Langue doc. du Centre
 rivers not fav. to navigation
 Rhon. rapid. Loire - sandbanks
 & Challow. Seine - sandbanks
 & meandering. Garonne shallower
 Heavy floods occ. occur in 4 rivers
 Loire - rises in Vivarais range.
 sweeps round N.W. to Orleans.
 then S.W. to Bay of Biscay
 trib. Allier. Cher. Nièvre &
 Creuse. - Maximum at the birth

Garonne - rises in Pyrenees - flows
 N. & to Toulouse. Meuse N.W. to French
 trib. St. Ariege. Tarn. with Aveyron
 Lot & Dordogne.

Seine rises on plat. de Langres. N.W.
 course to Bay. Ch. trib. E. - Yonne.
 Essonne. Eure. St. Aube.
 Marne. Oise. Aisne.

Rhone - rises in Pennine Alps
 enters Fr. below Geneva. flows
 W. to Lyons. thence S. to sea.
 enters by 4 arms. forming delta
 called Camargue - comp. of mudflats
 lagoons & marshes. trib. St. Saone
 with Dore. Saone & Doubs.

Less imp. Adour. Charente

Saone - var. - W. of Rhone.
 Herault. Ard. Aude. Lot. & Tech

Spain

Coast line - reg. in outline. irreg. in
 details - no deep inlets to promote
 commerce in interior - but good harbours.

N. coast - C. Pines & Orizabal. harbours
 from B. of Biscay. harbours S. Sebastian.
 Bilbao. & Santander - Port of Madrid.

N. W. Between C. Orizabal & Finis lere - Rio
 de Betanjos with 2 harbours - Ferrol & Coruna.

In Portugal - est. of Douro & Tagus
 serve as harbours of Oporto & Lisbon - latter
 CD accom. navies of all Europe. - Oporto
 has bay at river mouth. C. Roca Espichel
 & S. Vincent. B. of Padis. 5 on. long
 B. of Sagaltes 6 on. long. sheltered on all sides
 except S.

p60mc30

P. Malaya. Lapalga. Europe.
Gata.
S. Coast - has no good harbors
Barcelona - in acc. to large ships
in acct. of bar. - C. Palos. S. Mark.
+ Creux - length of C. line
1900 m. Naval eng. -
Lapalga - Nelson 1805.
S. Incident - Rodney 1780 Naples
1836. Ymiris terre - Anson 1741

W. Ranges - open little else
from edge of plateaus - hence
very irregular at on two sides
In reg. of outline - Ant. of
plateau. A terrace formation.
More like of. than Europe.
From descent to coast by series
of terraces -
Pyrenees - not a continuous
line - cent. & W. dist. form one line.
Gaston another - Com. with Maladetta
in wh. is Pic de Bethon. 11,000 ft.
with 5 other pts over 10,000 ft.
Range highest in center - more
rugged in Sp. than Pyrenees - good
Car. roads at each extremity of range
Passes so numerous - Montcal
Ridge - Range of fairs
Sierra Nevada - has 7
peaks above 10,000 ft.

p70mc30

Coffres - Melabacen - 19,860 -
Sep. from Rischach de Veldach
glaciers - snow line - 9,500 -
Southern spurs abound with
romantic scenery. descend by
terraces to Med.
Sierra Nevada - descends
steeply on Guadalquivir side
a wild & deserted region.
with numerous valleys.
Whole of great central range
wh. divides the plateaus - well
rugged. - Sierra de Estrella
remarkable for number of spurs
in its summits called 'jugs'.
River system. Rivers of plateau
generally shallow.

Italy

Coast - not extended 2000 m.
on Adri. Ionian. Tyrrhenian Seas
Com. value lessened by (1) All dep.
brought down by rivers - (2) Absence
of lakes of suff. strength to clear away
such deposits - effect (1) estuaries
of rivers unavailable for harbors
Coast line of Adri. in constant
state of ch. so that old Roman
ports Ravenna, Ancona - are now
inland.

3) that artif. ports formed
by moles & pier than usually
found to be choked. as at Salerno.
Brindisi - harbours
therefore deficient - esp.
on E. coast which is low & requires
most deep ports. Venice
Ancona Gallipoli & Bari -
S. Coast, Taranto. V. f.
W. coast more varied.
Ex. harbours in enclosed
bays - Naples - Spezia & Genoa -
Liguria & Civale
Verchia

Liguria group S. Coast
between Genoa & Ravenna -
S. coast, high & varied
W. coast has series of fine
open bays -

Italy - Cont: Peninsula
Cont. & pen. separated by
Sweep of Apennines
ft. plain enclosed between

Alps + Alps - slopes towards
Adriatic watered by R. Adige on
Oliv. by Berician hills. - fertile
& fairly good corn.

Turkey

1. Position - resting on Bk Sea & Arch.
country str. between these 2 seas.
makes it int. to com. countries
of W. Europe - First rate power
holding Const. w. seal Bk Sea & Danube
have much power over Levant. might
set control of ov. route thro' Egypt.
Hence encroachment (Russia) jealousy
by great states whose int. it is to
preserve neutrality of Bk S. - therefore
policy of Turk emp. matters of Eu. int.
"Rasul?"

Coast line sea board on Arch, Bk. Adri
& Ionian seas. good harbours on each
Coast - of Arch irregular. good port -
At Volo. - Saloniki. good harbours.
Gallipoli. one of best harbours in Turkey
Golden Horn at end of Bosp. a secure
& capacious harbour to Const.
Co. of Bk Sea between Bosphorus & Danube
interestingly reg. Varna. chief port.
Adri co. open & reg. with bays that
furnish good harbours.
S. S. has met on border of Greece. f. of Arch.
with mod. good harbours.

Carp. Danube basin & Balkan Pen.

Dan. b. - oliv. mts 2. by wedge like mass of highlands. wh. meet. Carp. at Orsova on bks of Danube & from joye - east - sec - the Wallachian Plain - fertile & well watered. W. sec - open out-wards Hungarian plain. here Turkey has only S. of basin - rugged throughout.

Balkan Pen. broken up by numerous lofty mts ranges. in the W. Dinaric Alps conts. m. ch. wh. form watershed between Arch. & Adri. & W. - greater height 9500. term. in chain of Pindus - sends spurs E. & W. S. of them, three lines of highlands run S. from Balkans. - div. basins of Vardar, Cruma, Kara-Li & Maritza

Rivers. imp. - as showing great natural barrier across Balk. barrier - rivers so situated - sources often each other as to be available for this purpose. Danube basin - portion of S. b. in S. Y. 1) S. bank from Ark. S. to N. Orsova. (2) N. bank from Ark. Ors. to conf. of Save. (3) N. bank of Save to conf. of Unna. - 1 most imp. includes

Walla. plain. - In up. pt. of plain Dan. skirt S. edge. near spurs of Balkans. below Ruschuk. diverges from hills N. E. here open country both sides. more to be within 35 m. of sea. sep. from it by ridge of rolling downs - 150 ft. - throughout plain. Danube divides & subdivides enclosing long islands - lakes & morasses fringe its banks - part in Moldavia. tribs very num. E. Aluta, Sereth, Pruth - St. Isker & Yantra.

Maritza joins Dan. in 2nd sect. & Save, with its tribs. the third Maritza - most imp. river flowing into Arch. drains whole region between Balkan & Despot.

Struma flows thro Marsh or Lagoon of Likiros. - Vardar. traverses broad & fertile valley

Macedonian Province - Stage on wh. St. Eu. powers come into contact with Turkey & with each other. due to geog. position Roumanie most imp. - open to Russia on side of Pruth. - to Austria by corner of Danube. to mar. nations of W. by Ark. sec. - key to nav. of Danube. Stepping stone to S. in E.

Roumanie consists of united prin. of Wallachia & Moldavia. - former rich pl. between Carp. & S. Dan. - later along course of Sereth. betw. Carp. & Pruth.

Pop. nearly 4 m. rich soil
mills as grain of ex. minerals
abd in Carps. Whit ex. Salt &
petroleum (seeds in vps -) and
to no acc. - wh. Romans - Waring
att. to fr. Ch. - in rice drawn to
Hung. port of Au. emp. in rel. to Rome
fwd. by pome or Dominus ass. by
rep. bodies no power. Roman
have sit. aside Reg. of Eu. power.
Port receives 40,000 vps.
Service, less int. to Europe.

Sp. int. for slave & sections of
Nat. - Russia & Slavonian
State - much of surf. covered
with forests - most herds of
deer - morality - low.
hered. Rome.

Chonogay - Rich Int. on
a rugged bank of Danube Alps
fr. Ch. with - farmers for
clipped land - unavail. resistance
to Turk rule - ruling
pome - Hospoda.

$$\begin{array}{r} 50 \times 25 \times 20 \\ 20 \\ \hline 100000 \\ 25000 \end{array}$$

Army of Sch. Farm: App: 8c -
Disabling Power -
Classification
Div: of time
Discipline
Regiments

France

Normandy & N. Fr.

Brittany & W. Fr.

Paris

Loire Valley

Western Lowlands

Eastern Highlands

Rhône & S. Fr.

The Alps - highlands

In 801

France.

By a "beautiful country" in French
generally understood fertile &
cultivated. Climate excellent.
Many of its vineyards, the most
valuable spots in the country, occupy
tracts of poor, barren waste land
wh. in our climate wd be absolutely
unprofitable.

Throughout nearly half of France,
especially in Lower Normandy, Brittany
a great part of the country S. of Loire,
neighbourhood of Pyrenees,
Sonnets, Auvergne & Gascony
enclosures & hedges as common
as in Engd. = much of France.

One of prettiest routes thro' France
could at Paris. Follow Seine
up to Paris, then take road to Moulins
then quit it for Auvergne. It
to the Rhone, at Valence & Viviers
Most beautiful districts are in
the north, Normandy, the banks of
the Seine - the prairie of the great
rivers of Fr. the wild coast
scenery of Brittany; in the centre,
the Loire below Tours, parts of Auvergne
Auvergne, the Rhone, by some preferred
to the Rhine on acct of more fertile

prospects; in the east, the hills of
the Jura, the entire valleys of Dauphiné
& the savage magnificence of peak &
glaciers round the Mont Pelvoux.

Among Vosges & Ardennes, many
romantic scenes. In the south, Provence
with its sunny sky, too arid to
deserve general praise except at
foot of Alps between Toulon & Nice.
Pyrenees however offer finest
scenery in Z. = S., but no lakes.

Brittany, Maine & Angers have
appearance of deserts - Flanders
Artois ~~absolutely~~ fertile - Picardy
numerous. Champagne & Reims
almost arid. Lorraine & French
Comté - sombre woods.

Discrete waiting in fine scenery
have architectural remains & relics
of antiquity - Heaths of Brittany
Celtic remains - abbeys in most
beautiful churches. Cathedrals
of Chartres, Bourges, Strasbourg,
Reims, Troyes, Amiens, Beauvais,
Abbeville - Metz - 3rd of Rouen -
France particularly rich in such remains
Gothic cathedrals. Some of the finest
existing - far larger than those of
England - but almost all unpreserved
Rose or wheel windows more frequent &

larger than in Eng. cathos ^{picture 30} ^{Latt. must}
to beauty of those in France. Sometimes
3 in on church. Painted glass
in ch. exceedingly beautiful

Finest prov. cities Lyons, Rouen,
Bordeaux, Marseilles & Nantes -
commerce. Many fine buildings.
All smaller towns have certain features
in common - formal walks planted
with ~~trimmed~~ trees - gay on Sundays
& fete days - only walk taken by
French towns - people - towns usually
surrounded by wall or barrier. Streets
often narrow. with no pavement at
side - open gutter in center - barracks
everywhere. many soldiers - grand
Place or sq. in the side, large
white-washed building with sentinel
in front. The prefecture. In all
the larger towns, museum of N. H. &
of paintings - public library

Picardy & Ile de France not-
picturesque. Some fine cath. Amiens
Beauvais & Abbeville

Normandy full of interest - varied
outline - swelling hills waving with
corn - beautiful valleys full of orchards
& rich pastures in which are herds.

windy river - richness ^{plentiful} ^{careful}
cultivation - remains of antique
venerable cities, the delight of painters,
noble cathedrals, abbeys & chs. scattered
over country, & every village
has something to be proud of.
Normandy one of most attractive
parts of Fr. Parts of upper N.
flat, bar, tablelands. 14
Basin Normande - former
sunny slopes, winding dales, hedgerows
orchards. Thatched cottages - green
village spires - white chalk cliffs.
reminds Eng. of home. Pleasant
to remember that this was cradle
of Normans who conquered Eng.
Some ruined abbeys in banks of Seine.
Scenery of river - great - with
highway connecting Paris & Havre.
Very pleasant. Innumerable
islands, planted with rows of
poplars & willows often rather
monotonous. Mont St Michel
rising from sea, very imposing.
N. abounds in old castles
Chateau Gaillard, par. centre of

Coeur de Lion, Falaise ^{P190mc30} - birth of
W. the C. & many others, Cradley
our Eng. nobility - above all
mont St. Michel! Jutres-Ch.
& grand natural obj. Caen
Rouen, Bayeux. Conlances.
de fine churches.
Cherbourg - dock yd & breakwater.

II

p20 amc30

Wilton Constitutional History (Wilton)

Nat. Council - D. of P. - Ladies of rank +
 abbesses - In session - Dna, Oppa, & others
 Alfr. ordained meeting twice a year
 laws & customs as by King with advice of nobles
 Alfr. said to have had 3 courts or councils
 1. Conf. persons. 2. Rps & nobles. 3. General Council
 Egbert summoned Wilton at Winchester & London
 to consider means of restoring games.
 Edw. I to consider dissension between
 regular & secular. - In session for
 trial of Earl Godwin.
 Edw. I caused 12 persons to be chosen
 from each co. to inform him as to
 laws of Eng.
 Succeeded by Great Court Baron in
 Norman period - every lord held his court
 Baron - King of Eng. & P. & B. - knights in chief
 Henry II - Const. of Eng. & P. & B.
 2. Assize of Clare 1164. - Certain
 reg. in civil affairs & itinerant justice
 cipp. to try causes in coo.
 John. Earliest summons of barons by writ
 1205.
 Magna Ch. Chp. King shd personally
 summon great barons. Other barons
 in chief summoned by sheriffs & bailiffs
 40 days notice - Consent of court
 nec. for change of law & every day of law
 times of meeting. Re. Ch. W. shd. Conf.
 Apper. of Saxon Ch. collected by Edw. Conf.
 wh. had been ren. by H. I - Annulled
 by pope - but confirmed 30 times by
 Henry of Henry III. He conf. 6 times
 Edw. I. once. Edw. III 15. R. III. 6.
 H. II 6. H. VI. 1 - 63 clauses

H. III. - Charta de Foresta 1225-
p21CME30

In mitigation of forest-laws -

Provisions of Oxford 1236 -

Oxford. Parlt 1258. - S. de Montfort
found co. - himself & 24 barons.

com. of 12 ^{to act in name of Parlt} ^{privy. of Oxford 1258}

1st Parlt of Com. & barons after

bat. of Mils. of Lewes 1265

Emp. by de Montfort to crush his

enemies -

Edw. I. - raised money by

Parlt. milled of by tallage -

Coms. com. of supply. red. of

grain: cond. of supply -

St. of Middlemarch - royal letter

Confirmation of Charter 1297

expenses of wars - Earl Robert &

Byrd. org. resistance. 15. in

Flamden - came armed to

Edw's Parlt. - 2 charters confirm

2 clauses inserted - all laws

illegal wh. had not consent

of Parlt. - Charter to be read

in all churches & a y.

Edw. II. - Summoned Parlt. yearly
Ordinances. barons. blight (ing)
to pass reg. for reform of abuses.
ex. couns. R. E.

Taxes on wool, cloth, & wine abolished
thing shd not quit-realm. much
was or elect off. of State without
consent of barons.

Edward III. - Ined. writ. of Parlt.

by consulting it on matters

of State - 3 Prin. recognis.

Illegal to levy taxes without

consent of Parlt. - no ch. of laws

without consent of both houses.

Com. shd. report into public

abuses & c. impeach public

councillors - First. Speakers -

Statute of Labourers - shd work

at ordinary wages for any m. - wages

shd be as before pestilence

Sta. of Treason 1351 defined.

Comp. apt. man's life. levying

war apt. h. or taking part with

his enemies

Sta. of Provisions - apt. Papal authority

Refusal to receive benefices & 14. h.

Lang. of Law Courts. Legal doc.

written in Norm. Fr. - Process

in Eng. record in Latin

R. II. Parlt. met in power.

Navigation laws - restricting carrying trade to Eng. vessels - (confirmed by Ch. II) Penal to Preeminence 1397) Penal to exercise or submit to foreign jurisdiction.

Henry IV. Commons proposed punishment of sheriffs who made false returns of eligible voters. Henry V.

H. VI. Members paid by election in convenience - members abolished.

Under Lancastrians, petitions became bills - not alterable by King. C. & orig. in either house - apart from supplies.

King & no longer interfere with debates of Parlt. - Voter in H. VI - 400 value freeholder.

Plantagenet Kings prerog.

Ext. Chis. relig. person involved. Convoked Estates of realm. C. disallows - his assent - nec. to all new laws.

Chief exec. adm. C. alone. Common: with foreign powers. Was Capt. of military & naval forces. - Was least app. of C. of justice. Large powers for reg. of trade - coined money - fixed weights & measures. App. courts & havens - immune ecc. patronage. hereditary revenues suff. to meet ordinary charges of govt - his own domains of vast extent. Lord paramount of all soil in realm. with many lucrative rights.

Constitutions. (a) could not leg. without const. of Parlt. (b) C. imp. no tax without const. of Parlt. (c) would to conduct exec. adm. accord to laws of land. if he broke these laws - adv. & agents responsible.

Constit. prev. not ready made. border land of debatable pt. Thus. (a) King & not make laws. but C. pardon offenders. (b) C. not imp. taxes. - & C. not break this rule. covenants in which they never to attempt it - granted do. Plantagenet pass up attempts but claiming right of giving & borrowing. (c) no Eng. C. be imprisoned without. & C. done without knowledge of Parlt.

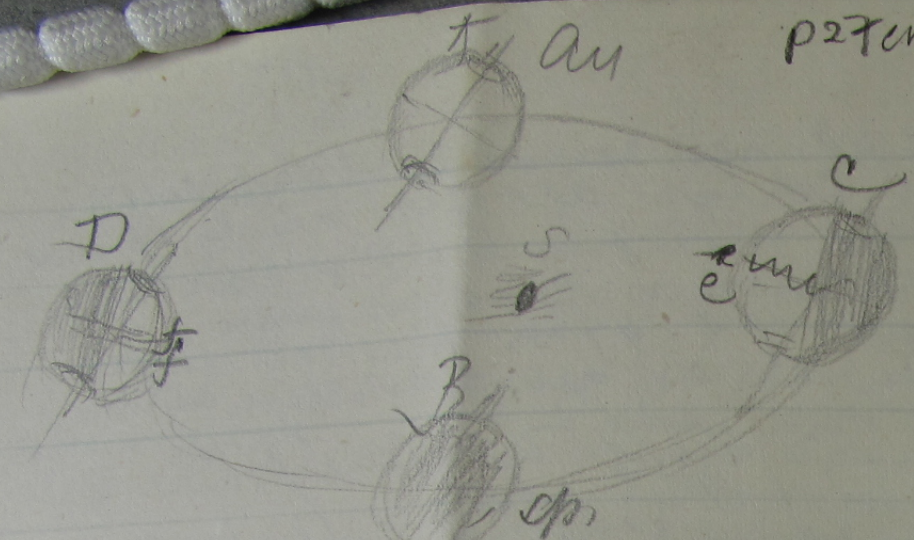
Barons permitted him to see
his power because they held redress
in their own power. Resistance
in mid. ages. comp. with
now. In 160 yrs before
Un. of Roses. 9 yrs reigns. 6 of
them depose. 3 lost lives.

As. & always

Sun can only light up that half of
the E. wh. is towards it. Consequently
at any moment one half of
our planet is in sunshine -
the other in shade. The rotation
of E. bringing each part in
succession from sunshine
to shade. Thus, Suppos. midday
at Arctic circle during spring equinox
Sun shines directly on eq. lights half
Earth. from pole to pole. ∴ all circle
half 24 hrs. in sunshine - half in shade
as we app. ^{summe of both} ~~vertical~~ ^{vertical} over E. & C. lights half
the world.

p26cm130

3. one of pl. rev. round S. at diff. dist.
cent. Sol. Lys. all of wh. nearly spherical
in form. move from W. to E. in courses or
orbits more or less circular
distance of 9. 97 on turn 365. 4. yrs.
Records this an. rev. E. rotates on its own
axis in 24 hrs. these motions
caused & inf. by att. & gravitation
of Sun & other bods.
from being center of light & heat. It
follows that during Earth's rotation
on axis only one half of her surface
exposed at a time to these influences.
& that every portion is exposed
successively. hence day & night.
Day & night of unequal & varying
length on most parts of E's surface
according to seasons.
Succession of seasons caused
by the facts.
First. That Earth's orbit is not a perfect
circle. but an ellipse.
Second. That E's axis is not perp. but
inclines at angle of $66\frac{1}{2}^\circ$ to plane
of orbit. or to imaginary surface
extending between S. & S. on a
line with the path on wh. she travels.
Third. That the earth in moving does
not alter her position - her N. pole
being always directed towards the
N. P. S. in the heavens - hence
maintaining the same position with
regard to the St. sh. presents
diff. parts of her surface to the
direct rays of the sun as she
revolves.



A B. Light & heat of Sun strike at eq. day & night equal. equinoxes spring & autumn.
 between them. day & night respectively lengthened & shortened in the N & S. half. as we app
 C & D. When point presents to sun is at E - mids. in S. parts & winter in N.
 at f. N regions have mids. & you

Shew that sun appears to travel round E.
 That the E. really travels round sun. mutually attract Equilibrium.

Why is not sun in centre of earth's orbit?
 1,000,000 -
 3,000,000 -

On what does variety of seasons depend in length of days and nights position of E. with respect to sun.
 Why has not earth = days & nights all year? per: eq. scorched - 40 or 50 deg. each side
 Why has equator equal days & nights?

Shape

spheroid - sphaera - sidos like
 dia: at axis 7899. in opp. direction 7925 1/2. diff: 26 1/2 in. hence oblate sph: i.e. figure flattened at axis & bulging at sides.
 Spin ball of clay or putty round its own axis; tendency of revolving bodies to fly off from centre (centrifugal force) causes mass to bulge at centre & flatten at poles. to this tendency + some orig: yielding condition of earth's mass - cause of oblate form. earth's mass kept together by gravitation when it rotates. centrifugal force prop: that E. is round
 Mean diam: 7912 1/2 - or in round numbers 8000. mean circum: 24,858.

or - 75,000. radius, or distance from surface to centre 4000.
 Superf: area 197 m. of miles
 51 m. of land. 146 of water.

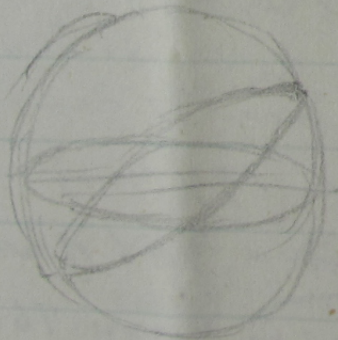
Why are our days in June 16 hrs - mths f.
 Why have the poles 6 mths of day & having equal days & nights have no seasons at eq? (perpendicular)
 Prove that we are nearer sun in winter - (summer & days longer & mths slower - distance greater - sun's apparent diameter 1/4 greater in mths

p29cm30

Why are our winters colder than our
 summers - Sun higher above
 our horizon - hence rays perpendic-
 also days long - nights short -
 accum. of heat -

Account of equinoxes - (earth's
 axis perp. to line drawn from
 Sun - (on 21st March Sun Vert. to
 tropic of Cancer - all
 circles par. to eq. unequally
 - those in N. have greater
 parts in light - in S. greater
 parts in darkness -

Why do the days lengthen &
 shorten from eq. to polar
 circles every year.



p30cm30

Rate of m. round Sun. 1140 m. per minute
 rate varies - greatest when nearest -
 Sun -
 earth enclosed in celestial sphere
 app. motions of celest. bodies
 index of real mo. of ter.
 Axis - poles - of equator - declivities
 turning points of sun -
 Tropics - 23 $\frac{1}{2}$ N. Cancer - S. Capricorn
 because these const. occupy a corresp.
 part of heavens - 23 $\frac{1}{2}$ from each
 pole - Arctic & Ant. circles (Arctic the bear)
 Torrid zone - between tropics - Sun
 always vertical in some part of
 space - N. & S. Temp. Liquid zone
 each of torrid & liquid zones 1622 $\frac{1}{2}$ m.
 each of temp. 2969 - div. into
 equatorial - tropical - sub-tropical warm temp.
 cold temp. - both are - are poles.
 Ecliptic line wh. cuts eq. obliquely
 touch. opp. sides of tropics. - orbit
 describes apparently by Sun round -
 really by Earth round Sun - eclips. because
 all eclipses happen when moon is in same
 plane. - Equinoctial pts - where
 or Nodes - where eclips. cuts equator.
 because when Sun in these parts of course
 day & night equal. - 21 March - 21 Sept.
 Lesser Circles Meridian - parallels
 Arctic & Antarctic mark limits reached
 by Sun's rays as it stands over
 eq. at time of equinoxes.

Maps - diff- to transfer spherical
to plane surface

Such processes called projection
lines supposed to be thrown from
from spherical to plane surface

Two kinds of projection - perspective
when spherical surface is
depicted as it appears to eye of
observer - as map of world in
hemispheres -

2 on prin: of development
Sphere supposed to be unrolled
forced to assume quadrangular

shape: map on Merc. Proj.

designed for use of navig.

Other proj. admit of straight lines
being laid down only in direction of
cardinal pts - Merid: par: treated

as straight lines - ~~sphere~~ cylinder
each merid: perpend: to eq:

To preserve proportion of ϕ of lat
& long. former gradually enlarged
while merid: of uniform size

Suppression of apses -
 because Lady Ch. added to
 east end - pec. to Eng. date -
 spire intro. at early date -
 In first form a pointed roof
 rising from cornice of tower -
 afterwards more graceful -
 within parapet of tower + pruned
 with pinnacles at angles -

Chichester. belongs to Ed. I.

Many parish churches in Early Eng.

More before conquest fallen into decay -
 sometimes only Nave & chancel ^{only cath}
 side aisle

Lincoln - Westminster (Salisbury)
 York - Southwell. Wells - ^{entirely early Eng.}

Decorated English - Edw. II.

Characteristics - tracery of windows

great east & west windows -

pec. to Eng. (cont. lofty gothic
 portals + wheel windows west)

tracery - geometrical - regular

figures - (not circles only) flowing

tracery. Edw. III (reign of York -

1330) buttresses finished

by pinnacles - enriched with

ornaments (crockets) - Chpts

of piers - not detached from

main columns - worked in

same stone - niches much

increased in size + importance
 screen to west front of Recler
 composed entirely of niches +
 lanterns - Bp from disson - 1330

Gothic Architecture

Prevalent throughout Europe from

12th to 16th cent. - In 13th cent.

uniform - afterwards - national

f. Brit. eminent for decorative

effect + boldness of execution

vertical line - principle of compos:

pillars clustered to assist: with

chpts sh. support roof. Capitals

reduced - no angles to interrupt

eye in progress upward - same

tendency in pointed arch.

buttress - important - lightness + strength

2 styles peculiar to f. B. appeared

& passed away in 13th & 14th cent.

lancet or Early Eng. - Edw. I.

Decorated Eng. - trend of 14th cent.

Early Eng. Salisbury Cath. pinnacles

little used - arched panelling.

niches - only a deepened arch.

with pedestal for figure - windows

tall & narrow - without divers

a tracery, but combined in group

of several opening - (Westminster Abbey

Henry III - 1245 - lancet window nearly

land wide) ornaments - trefoil

+ quatrefoil - clois both peculiar

to Eng. gothic - improved into

a sort of four-leaved flower - used

largely in York - laid aside

abt. 15th cent. - style of roofing

peculiar to Eng. gothic

Cornices . ornamented
with large flower - protegee
heads . etc. Chief ornament -
the ball flower - as char: of this
period as dog tooth of former.

- A small round bud of three
or four leaves, ch. open just
enough to show ball in center.

Spires ^{added 1834} numerous & magnificent
Salisbury - height & graceful proportion
S. Mough's exp'd remarkable for
rich effect of surrounding
pinacles.

Parish Ch. of D. In. numerous
& splendid - especially in
Lincolnshire where Ch. arch.
Seems to have flourished in
14th cent.

Annual Motion p350m230

Proof. Stars visible in daytime thro
telescope. If seen to seem in
a line with a fixed star to-day
at any particular hr. it will
in a few weeks be found E.
of him - & if obs. be continued
we shall be able to trace the
Sun round the heavens to
the very star from wh. we set out.
∴ Sun must have journeyed
round E. or E. round sun.

but sun m. times larger than E.
& as Ann & E. mutually attract
one another their momenta
or force must be equal for
them to maintain the same
position with regard to one
another - force may be gained
by either motion or weight -
E. must make out by motion
what it wants in weight.

∴ must move round the sun.
The velocity of E. must be between
2 & 3 h. the times that of sun. as that
is diff: of weight between the
two bodies.

This motion produces seasons.
wh. depend on the position of E.
with respect to sun. & the
length of the days & nights.